

INTERNATIONALSEARCHREPORT

International application No.
PCT/JP2004/019464

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl ⁷ B23C 3/00, 5/10 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int.Cl ⁷ B21J 13/02 B23C 3/00, 5/10 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Japanese Utility Model Gazette 1922-1996, Japanese Publication of Unexamined Utility Model Applications 1971-2005, Japanese Registered Utility Model Gazette 1994-2005, Japanese Gazette Containing the Utility Model 1996-2005 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-105086 A (HONDA MOTOR Co., Ltd.) 2001.04.17 (Family:none)	1-8
A	JP 2002-239676 A (YUTAKA SEIMITSU KOGYO, Ltd.) 2002.08.27 (Family:none)	1-8
A	JP 9-150305 A (RIKEN) 1997.06.10 & US 5919012 A & EP 788040 A1 & DE 69619789 T	1-8
A	JP 6-134648 A (MAKINO MILLING MACHINE Co., Ltd.) 1994.05.17 & US 5378091 A & EP 579371 A1 & DE 69326397 T	1-8
A	JP 8-263122 A (HONDA MOTOR Co., Ltd.) 1996.10.11 (Family:none)	1-8
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 10.03.2005		Date of mailing of the international search report 29.3.2005
Name and mailing address of the ISA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer YOSHIAKI TAMURA Telephone No. +81-3-3581-1101 Ext. 3324
		3C 8608

Form PCT/ISA/210 (second sheet) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/ 019464

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 8	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 8	YES
	Claims		NO

2. Citations and explanations

The subject matter of claim 1-8 is neither disclosed in any of the documents cited in the
ISR nor obvious to a person skilled in the art.